Remarks

As a result of the foregoing claim amendments, claim 1 has ben amended, claims 15 and 16 have been added and claims 11, 12 and 14 have been canceled. Support for claims 15 and 16 are found throughout the instant specification, for example, Example 5 beginning on page 52. Claims 1-10, 13, 15-16 are now pending. No new matter has been entered by these amendments.

Rejections under 35 USC §102/103

Claims 1 - 10 and 13 are rejected under 35 USC §102(b) as allegedly anticipated by, or in the alternative, under §103(a) as allegedly obvious over WO 98/17782 (Duff et al.). According to the Office Action, Duff et al. discloses a transgenic mouse comprising a PS1 gene having the M146L mutation and further comprising an APP gene of the APP695 isoform having the mutation K670N and M671L (Swedish mutation). Further, the Duff et al. transgenic mouse exhibit amyloid plaques and behavioral deficits but is silent with regard to mitochondrial dysfunction. The Examiner contends that the characteristic disclosed in the prior art is substantially similar to the claimed instant invention and, under MPEP§2112, a rejection under 35 USC §102/103 can be made when the prior art product seems to be identical nonetheless silent as to the inherent characteristic. However, there is no basis to believe that the mitochondrial dysfunction disclosed in the instant invention is an inherent feature of Duff et al.

The transgenic animals of the instant invention exhibit neuronal loss, a characteristic not inherent in the transgenic mice disclosed by Duff et al. The transgenic mice of Duff et al. exhibit amyloid deposition, reactive astrocytes and behavioral deficits. The behavioral deficits did "not correlate with the deposition of Aβ suggesting that these deficits of cognitive impairment are not entirely related to a toxic component of visible amyloid deposits" (Duff et al., end of first full paragraph on page 18). Duff et al. is silent on neuronal loss. However, Takeuchi et al. (Am J. Pathol. 157:331, 2000) examined the Duff et al. mice (see page 332, first column, first full

paragraph of Takeuchi et al) for neuronal loss. Takeuchi et al. reported observing no neuronal loss in the PS/APPsw mice (see Figure 4, page 335 and Figure 5, page 336 of Takeuchi et al.). Further, Takeuchi et al. concludes that double overexpression of these transgenes "do not cause overt neuronal loss" (see page 336, first paragraph of Discussion section, Takeuchi et al.). Unlike the Duff et al. transgenic mouse, the transgenic animal of the instant invention displays neuronal degeneration as described in Example 5 (beginning on page 52 of the instant specification) and as claimed in claim 15. Thus, the transgenic animal of Duff et al. clearly does not inherently have all the characteristics of the transgenic animal of the instant invention.

If transgenic animals do not share certain observed characteristics, there is no basis to presume they would share any particular inherent characteristic. The Duff et al. transgenic mouse does not display the neuronal degeneration disclosed by the transgenic animal of the instant invention and thus there is no basis to believe these two different transgenic animals would share mitochondrial dysfunction. Additionally, the instant application specifically indicates the mitochondrial dysfunction may be the underlying cause of the observed neuronal degeneration (page 15, line 17 of the instant specification) providing additional support that the transgenic mice have distinctly different characteristics as to their mitochondrial structure and/or function. For the foregoing reasons, Applicants respectfully request the Examiner withdraw the rejection under 35 USC §102/103.

Applicants respectfully submit that the application is now in condition for allowance and request notice thereof.

Respectfully submitted,

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